

# **EXHIBIT 4**

UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION

LANCIUM LLC,

Plaintiff,

v.

LAYER1 TECHNOLOGIES, INC.,

Defendant.

Civil Action No. 6:20-cv-00739

**Jury Trial Demanded**

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Lancium LLC (“Lancium”), by and through its attorneys, brings this action and makes the following allegations of patent infringement relating to United States Patent No. 10,608,433 (“the ’433 patent”). Defendant Layer1 Technologies, Inc. (“Layer1”) infringes the ’433 patent in violation of the patent laws of the United States of America, 35 U.S.C. § 1 *et seq.*

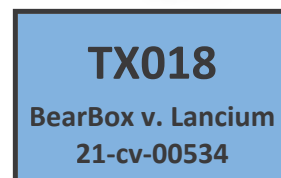
**THE PARTIES**

1. Plaintiff Lancium LLC is a Limited Liability Company, with its principal office and place of business at 6006 Thomas Road, Houston, Texas, 77041.

2. Upon information and belief, Defendant Layer1 is a Delaware Corporation whose principal office and place of business is at 221 Kearny Street, San Francisco, CA, 94108. Layer1 also has a place of business in Ward County, Texas, which is approximately 100-150 miles west of Midland, Texas, where Layer1 conducts Bitcoin mining operations.



COMPLAINT FOR PATENT INFRINGEMENT



PAGE 1

### **JURISDICTION AND VENUE**

3. This is an action for patent infringement arising under the patent laws of the United States of America, Title 35, United States Code.

4. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331, 1338(a).

5. This Court has personal jurisdiction over the Defendant Layer1 because Layer1 has committed acts of patent infringement in this District. Upon information and belief, Layer1, utilizes Lancium's patented systems and methods to adjust power consumption based on power option agreements in connection with Layer1's Bitcoin mining operations in this District. Layer1, therefore, has systematic and continuous contacts with this District, regularly transacts business within this District, and regularly and purposefully avails itself of the benefits of this District. This Court further has personal jurisdiction over Layer1 generally because Layer1 maintains a principal place of business in this District (*e.g.*, Layer1's Bitcoin mining facilities are located in this District) and Layer1 regularly conducts business in this District. Layer1, therefore, has established minimum contacts within this District such that the exercise of jurisdiction over Layer1 would not offend traditional notions of fair play and substantial justice.

6. Venue is proper in this District pursuant to 28 U.S.C. §1400(b) because Layer1 has committed acts of patent infringement complained of herein in this District, and has a regular and established place of business in this District.

### **BACKGROUND**

7. Michael McNamara and Raymond Cline, the founders of Lancium, created the company to capitalize on the growth of both renewable energy and distributed computing. The founders understood that the rise of renewable energy would result in greater variability of



electricity production and also electricity price. The growth of more renewable energy would also lead to increased periods and locations of negative-priced energy.

8. Messrs. McNamara and Cline further realized that this increased variability created an opportunity. In 2017, Lancium began work on an entirely new type of data center that could essentially be “turned off” during economically opportune time periods. This new type of data center could operate during periods of negatively-priced or low-priced power and not operate (*i.e.*, not draw load), or operate in a reduced capacity (*i.e.*, draw a limited amount of load), during times when power prices were higher.

9. These “flexible” data centers are useful for many computing workloads, including Bitcoin mining. Lancium developed and patented power management monitoring and control software (“Controllable Load Resource Technology”) that permits data centers to ramp their power consumption up or down in seconds. This technology allows data centers to qualify as Controllable Load Resource(s) (“CLR”) in the Electric Reliability Council of Texas (“ERCOT”). Upon information and belief, Lancium was the first load-only CLR.

10. A load-only CLR can be thought of as interacting with the grid in an inverse fashion to the way that a power generation station interacts with the grid. For example, when the demand for electricity is low (resulting in a low price for electricity), a power generation station would typically decrease its production of power. But in such a situation, a load-only CLR would increase power consumption by, for example, engaging in computationally intensive activities requiring significant amounts of electricity such as Bitcoin mining. Likewise, during times of high-priced electricity (*e.g.*, periods of high electricity demand), a power generation station would typically increase its production of power. A load-only CLR, however, would ramp down (*i.e.*, stop (or reduce) its electricity consumption) by, for example, ceasing (or



reducing) Bitcoin mining operations. When this occurs, the load-only CLR (*i.e.*, flexible data center) receives the difference in the value of the real time electricity versus the data center's pre-existing power purchase agreement price. Lancium's Controllable Load Resource Technology allows, among other things, flexible data centers to operate as load-only CLRs and to participate directly in the energy and ancillary services market.

11. Lancium's Controllable Load Resource Technology also benefits the general public and renewable energy generators. For example, when the load-only CLR ramps down, the electricity that the load-only CLR would have used is available for use by other loads such as consumers (*e.g.*, home owners, businesses, etc.). And when electricity prices are low (*e.g.*, in times of low demand), Lancium's technology permits the flexible data center's computer systems to ramp up to, for example, mine Bitcoins, thereby providing a market for excess electricity generated by renewable energy generators (*e.g.*, wind and solar powered energy generators) helping to mitigate variability and periods and locations with negatively priced energy.

12. Lancium's Controllable Load Resource Technology attracted the interest of many companies, including, upon information and belief, Layer1 as alleged below.

#### **THE PATENT-IN-SUIT**

13. Lancium protected its revolutionary technology by, among other things, obtaining patents. On October 28, 2019, Lancium filed a provisional application no. 62/927,119 and, shortly thereafter, utility application no. 16/702,931, which duly and legally issued on March 31, 2020 as U.S. Patent No. 10,608,433 ("the '433 patent") titled "Methods and Systems for Adjusting Power Consumption Based on a Fixed-Duration Power Option Agreement." A true and correct copy of the '433 patent is attached as Ex. A.

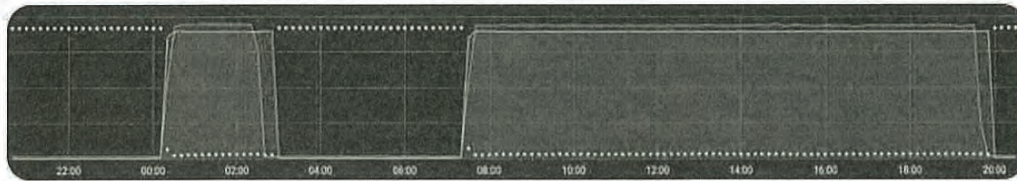
14. The '433 patent is assigned to Lancium, which owns all right, title, and interest in and to the '433 patent, including the right to assert all caused of action arising under the '433 patent and the rights to remedies for infringement of the '433 patent.

#### **LAYER1'S INFRINGEMENT**

15. Layer1 owns and operates Bitcoin mining data centers in, upon information and belief, Ward County, Texas. Ex. B; Ex. C. Layer1 describes these Bitcoin mining facilities as "game changer[s] in Bitcoin mining." Ex. B, at 1. "Mining Bitcoin is about converting electricity into money," says Layer1's CEO, Alex Liegl. Ex. D, at 2. West Texas power is "the cheapest power in the world, at scale." Ex. E, at 2. Layer1's average production cost per bitcoin is \$1,000.00, equating to a 90% profit margin at the bitcoin price of \$9,100.00. Ex. D, at 2.

16. Layer1's Bitcoin mining facilities not only mine bitcoins. Layer1, upon information and belief, recently qualified as a load-only CLR. Ex. F. Upon information and belief, by entering into "demand response" contracts and utilizing what Layer1 characterizes as "its proprietary demand-response software," these data centers can be tapped in real time to meet peak market demand by shutting down mining operations at a minute's notice and instead allowing their load to flow onto the grid. Ex. D, at 2. "In summertime when air conditioners in Dallas, Houston, and Austin are going full tilt, Texas electricity prices sometimes surge to nosebleed levels Layer1 will be able to make more money by shutting off its mining machines and allowing the power to flow through its substation to the grid," says Alex Liegl. Ex. E, at 3. "This is what being a virtual power plant looks like . . . [s]oftware command instantly decreases or increases many megawatts of electricity and #bitcoin hashrate to stabilize public power grids." Ex. G.





Layer1's control system, including its "demand-response" software, upon information and belief, infringes Lancium's '433 patent as alleged below and in the attached exemplary claim chart (Exhibit H).

### **COUNT I – INFRINGEMENT OF U.S. PATENT NO. 10,608,433**

17. Lancium incorporates by reference and re-alleges all of the preceding paragraphs of this Complaint as if fully set forth herein.

18. Layer1 infringes at least claims 1-3, 6-9, and 11-20 of the '433 patent literally or under the doctrine of equivalents in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing systems and methods for adjusting power consumption utilized in or by at least Layer1's Bitcoin mining facilities ("Infringing Products"). Exhibit H, attached hereto, is an exemplary claim chart showing how the systems and methods of the Infringing Products meet every limitation of, and therefore infringe, each of the above-identified claims.<sup>1</sup>

19. Lancium has suffered and continues to suffer damages as a result of Layer1's infringement in an amount to be determined at trial, which, by law, cannot be less than a reasonable royalty, but may also include lost profits, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

<sup>1</sup> To the extent the claim chart relies on exhibits not identified and attached to this Complaint, the exhibits are identified in and attached to the claim chart.

20. In addition, Layer1's past and ongoing infringement has caused, and continues to cause, Lancium substantial and irreparable harm for which there is no adequate remedy at law unless and until Layer1 is enjoined by this Court.

21. Layer1's infringement is willful. On May 22, 2020, Lancium notified Layer1 that Layer1's "data center demand response functionality . . . may infringe one or more Lancium's patents." Ex. I. A copy of the '433 patent was attached to the May 22, 2020 email. *Id.* After receiving no response from Layer1, Lancium reached out again on June 2, 2020. Ex. I. Layer1 did not respond, and has not responded to date.

22. Layer1, therefore, has had actual knowledge of the '433 patent since at least May 22, 2020.

23. Upon information and belief, Layer1 continued using Lancium's patented technology to operate its Bitcoin mining facilities in at least West Texas after May 22, 2020 (and continues those operations today). Therefore, at least as of May 22, 2020, and thereafter, Layer1's infringement was willful.

24. Lancium is entitled to a finding of willfulness and enhanced damages under at least 35 U.S.C. § 284 based upon Layer1's willful infringement of the '433 patent.

#### **PRAYER FOR RELIEF**

WHEREFORE, Lancium respectfully requests that this Court find in its favor and against Layer1, and that the Court grant Lancium the following relief:

A. Judgment in favor of Lancium that Layer1 has infringed, either literally and/or under the doctrine of equivalents, one or more claims of the '433 patent;

B. An award of all damages adequate to compensate Lancium for Layer1's infringement of the '433 patent;



C. Judgment that Layer1's infringement was willful and that the Court award treble damages for the period of such willful infringement pursuant to at least 35 U.S.C. § 284;

D. An award of pre-judgment and post-judgment interest at the maximum rate permitted by law;

E. A finding that this is an exceptional case and awarding Lancium its costs, expenses, disbursements, and reasonable attorney's fees related to Layer1's infringement under 35 U.S.C. § 285 and all other applicable statutes, rules, and common law;

F. A permanent injunction preventing Layer1, its officers, agents, servants and employees, and those person in active concert and participation with any of them, from infringement of one or more claims of the '433 patent or, in the alternative, if the Court finds that an injunction is not warranted, Lancium requests an award of post-judgment royalty to compensate for future infringement;

G. That Lancium be granted all other relief, in law or equity, as the Court may deem just and proper.

#### **JURY TRIAL**

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Lancium hereby requests a trial by jury on all issues so triable.

Dated: August 14, 2020

Respectfully submitted,

**BARNES & THORNBURG LLP**

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